Homework 16B p. 345-355

1. The following table shows marginal costs and benefits of the optimal quantity of pollution abatement that will occur at a local factory.

|  |  |  |
| --- | --- | --- |
| **Quantity of pollution abatement** | **Marginal cost** | **Marginal benefit** |
| 700 tons | $100,000 | $ 20,000 |
| 600 tons | 60,000 | 30,000 |
| 500 tons | 40,000 | 40,000 |
| 400 tons | 20,000 | 60,000 |
| 300 tons | 10,000 | 80,000 |
| 200 tons | 5,000 | 160,000 |

(a) What is the optimal level of pollution abatement? Why?

(b) If the marginal benefit of pollution abatement were to increase by $30,000 at each level because of the factory’s desire to improve its image and environment, what would the optimal level be? Why?

(c) What might cause the optimal level of pollution abatement to be 400 tons?

2. Suppose a local coffee shop in the downtown area decides to purchase a neighboring abandoned lot and convert it into a garden area with outdoor seating.

(a) Does this decision create an externality? If so, what kind?

(b) Despite the city’s positive response to the coffee shop’s renovation, other businesses in the area have not followed suit in renovating the many decrepit buildings and abandoned lots. How might the presence of an externality be in part the cause of this?

(c) In response to the lack of effort on the part of businesses to renovate the downtown area, city council members to take action. What are some ways that the city government could promote this kind of revival?

3. Explain the problem of adverse selection. How might this problem affect transactions in the insurance industry?

4. (Last Word) What is the Lojack? How does it create a positive externality?